

# The Michigan ENHANCE 911

GIS Repository Guide 2015



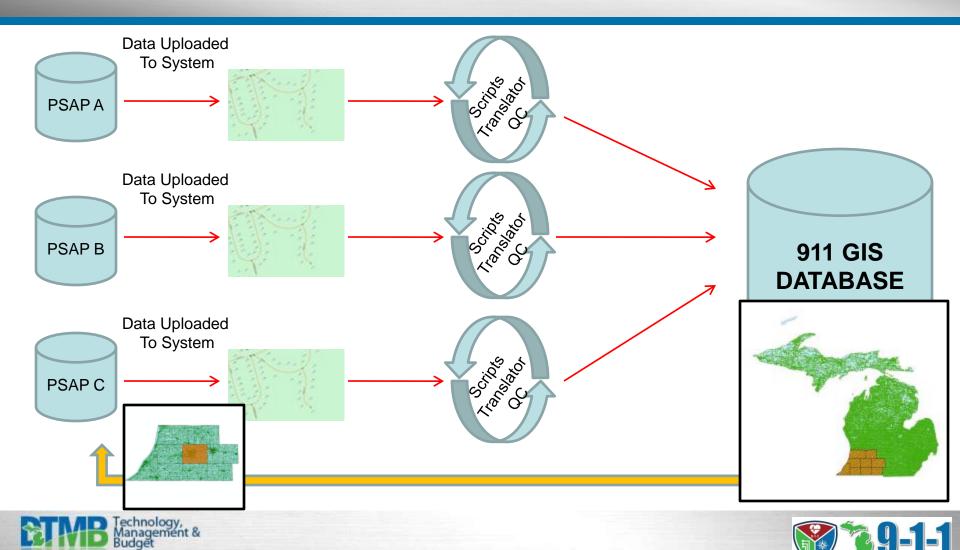
# **ENHANCE 911 Act Grant Project**

- Created a central 911 GIS Repository
  - Enabling PSAPs to share GIS information
  - Establishing MOAs
  - Setting standards for GIS data entry
  - Future framework for NG911 database
- Statewide Public Safety Answering Point (PSAP) boundary layer
- Statewide road centerline layer





### How does it work?



#### 911 User Request

This form is used to request access to the 911 GIS repository. It is located under "Current Issues" on the State 911 Committee website.



#### STATE OF MICHIGAN GIS REPOSITORY USER REQUEST

To register application users, the PSAP Director must provide the information in this table and return it via e-mail to <a href="mailto:armitagem@michigan.gov">armitagem@michigan.gov</a> or fax it to (517) 241-0387, Attn: Mr. Michael Armitage. A description of each role is provided below the table.

911 Repository Role	Name	Organization	Email and phone #
PSAP Administrator			
Alternate PSAP Administrator(s) (Optional)			
Data Importer(s)			
Data Exporter(s)			
Restricted Administrator			

you have any questions or concerns about this process, please contact.	

Mr. Michael Armitage, armitagem@michigan.gov at MSP at (517) 241-2809, fax (517) 241-0387 or Mr. Mark Holmes, holmesm3@michigan.gov at CSS at (517) 373-7910, fax (517) 373-2939.

<u>PSAP Administrator</u> – This role is established for the person who will be managing the accounts for the users within a specific PSAP jurisdiction. This role will typically be assigned to the 911 Director. This access is limited to PSAPs that are a branch of the entity that is party to the 'memorandum of understanding' for the 911 GIS Repository.

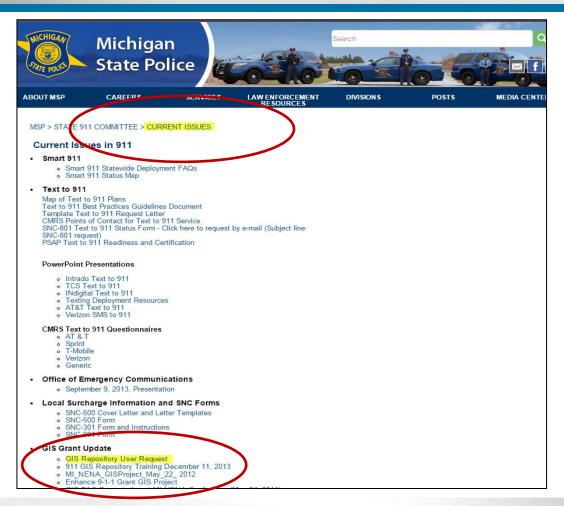
<u>Alternate PSAP Administrator(s) (optional)</u> – This role is established for a person to provide a backup role to the PSAP Administrator for assigning logins or accounts. This role will have the same permissions level in the system as the PSAP Administrator.

<u>Data Importer(s)</u> – This role is established for a person who will be providing GIS data updates to the repository system. This role can be assigned to a PSAP staff member, county GIS department staff member or a vendor. This role is typically assigned to the person who is maintaining the GIS data.

<u>Data Exporter(s)</u> – This role is established for a person who will be extracting GIS data from the repository for 911 purposes on a regular basis. For example, the data exporter might be the person who typically integrates GIS data with existing CAD systems.

<u>Restricted Administrator-</u> This role is established as a 'view only' for PSAPs that are not a branch of the government which is party to the 'memorandum of understanding' for the 911 GIS Repository.

## 911 User Request - michigan.gov/snc





#### **PSAP Administration Tools**

- Each PSAP (with MOU in place) will have primary designated PSAP Administrator
- Each PSAP (with MOU in place) can assign alternate PSAP Administrators
- Internal communication for approval processes needs to be determined locally
  - For example, approving PSAP boundary changes





# Roles

PSAP Administrator	This role is established for the person who will be managing the accounts for the users within a specific PSAP jurisdiction. This role will typically be assigned to the 911 Director. This access is limited to PSAPs that are a branch of the entity that is party to the 'memorandum of understanding' for the 911 GIS Repository.
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# Single Sign-On

## https://sso.state.mi.us



Access to the 911 GIS Repository is through the State of Michigan single sign-on (SSO)





# Single Sign-On

### https://sso.state.mi.us

#### Sign-Up

If you are a new user to Single Sign-On, click Register to create your User ID and Password.

Register

Creating a SSO account is simple. There is a 'Sign-Up' option on the main SSO sign-on page.





# Single Sign-On <a href="https://sso.state.mi.us">https://sso.state.mi.us</a>

To access the 911 GIS repository, click on 'subscribe to applications' once you sign-in through SSO. You will then need to select 'Michigan State Police' and '911 GIS Data Repository' from the pull-down menus.







# Single Sign-On

## https://sso.state.mi.us



#### **Application Portal**

WELCOME Michael P Armitage,

Your password will expire in 108 days.

You are currently subscribed to the following applications:

911 GIS Data Repository

Subscribe to Applications Add

Add new Roles to Existing Subscription

Account Maintenance

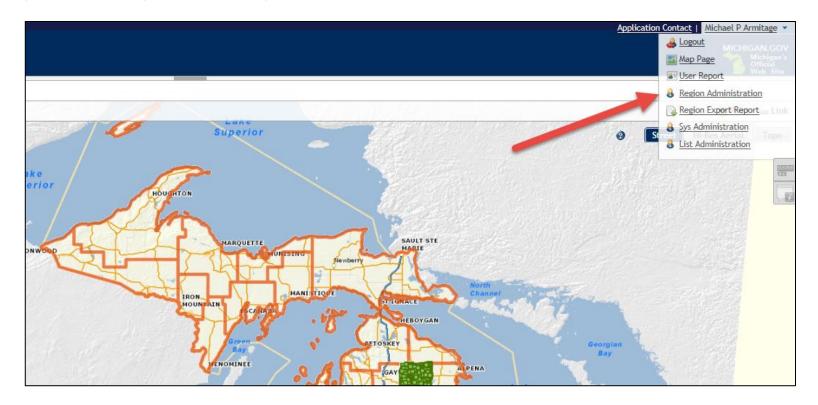
Sign Off

Once approved, the 911 GIS application will appear once you sign on.





Region/PSAP administrators can administer access privileges to their region through the 'Region Administration' link on the top pull-down.





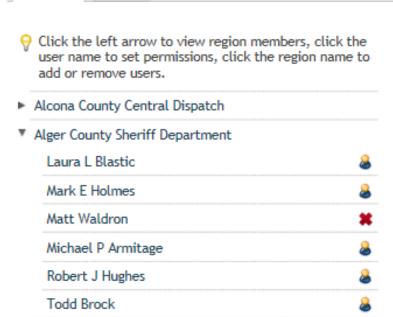


#### Administration

This is a screenshot of the 'Region Administration' page.

Regions

Users



#### Set Permissions for Jeffrey Bracket

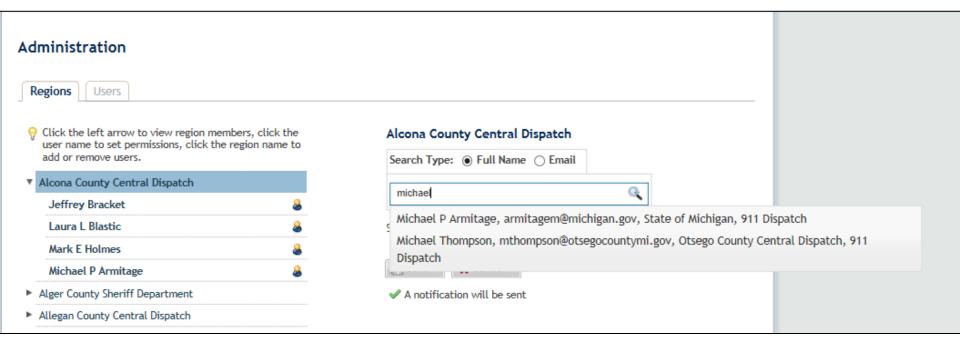
Permission	Region	Roads	Structures	Emergency Service Zones		
View Current	✓	<b>✓</b>	✓	✓		
View Pending	<b>✓</b>	✓	<b>✓</b>	✓		
Can View	<b>✓</b>	✓	<b>✓</b>	✓		
Can Edit	✓	✓	✓	✓		
Can Import	<b>✓</b>	<b>✓</b>	✓	✓		
Can Export	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓		
Check All						
☐ Save						



Allegan County Central Dispatch

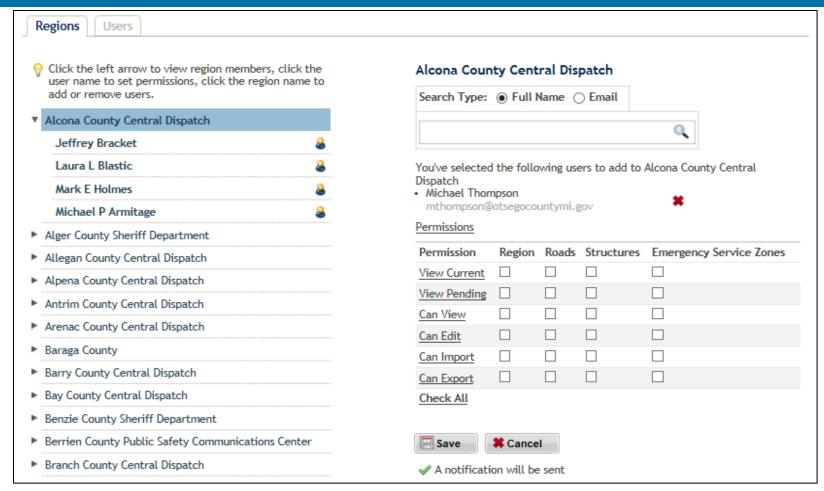


Region administrators can search for approved users to assign to their county/region.





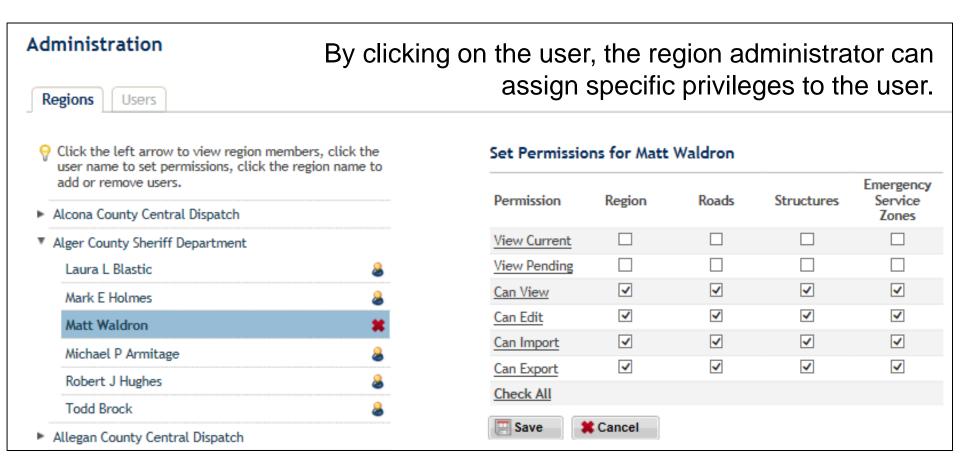








# Region Administration Tools: Permissions







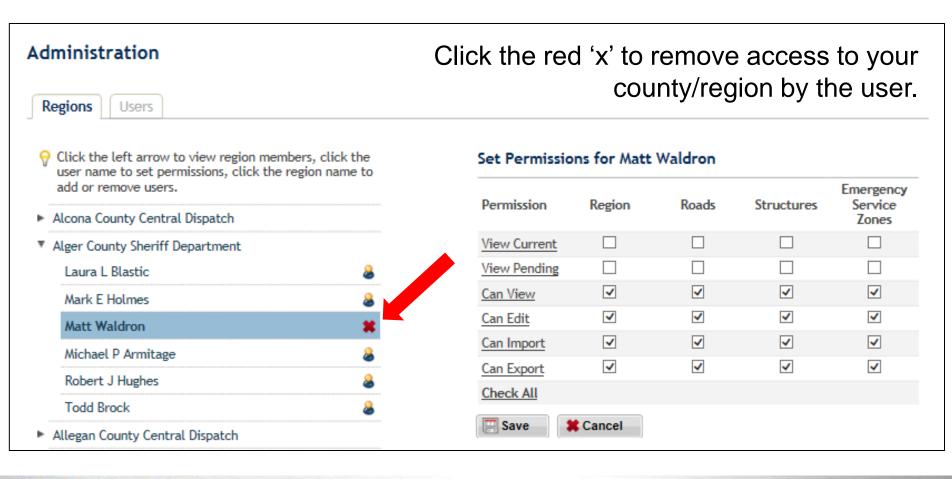
## PSAP Administration: Remove User from PSAP

- Removing User Accounts
  - Rights are removed by PSAP Administrator
  - Account is disabled by System Administrator request needs to be submitted by PSAP Administrator
  - Can be re-enabled if user goes to work at another PSAP





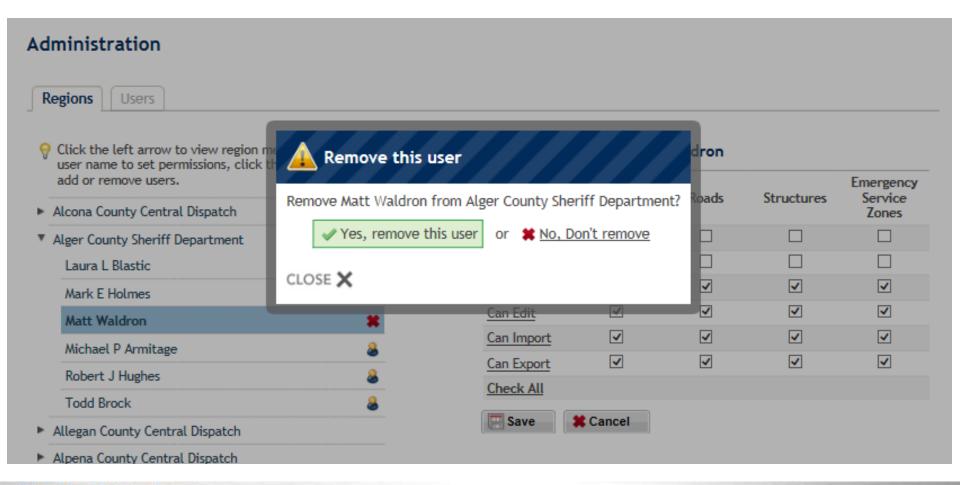
# Removing User Accounts







# Removing User Accounts







#### **PSAP Administration Tools**

#### Requesting data export rights for user

**PSAP A** 



PSAP Administrator sends request for CAD Administrator to have export rights for neighboring county







PSAP B



PSAP Administrator receives email to log into system and grant user export rights to PSAPs data

PSAP Administrator approves or denies export privileges





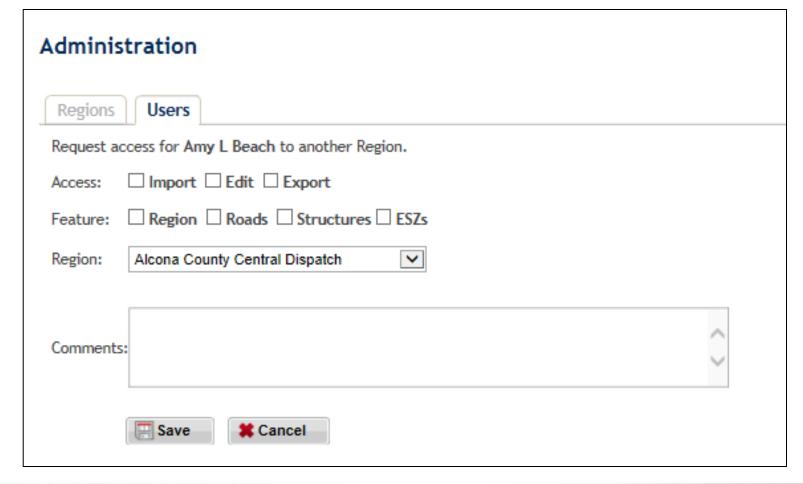
# PSAP Administration: Requesting Permission

#### Administration Region administrators can request their users receive import/export privileges with other regions. Regions Users Below are users currently assigned to one or more of your regions. You may, edit a user's information, request access to another PSAP, deactivate the user, or create a new user. Note that newly created users will not display in this list until they are assigned to a region. New User **Fmail** Phone Number Actio Name Organization Type 989-345-4911 Amy L Beach Ogemaw County Central Dispatch 911 Dispatch 231-256-8152 Andrew Giguere County GIS Contact Leelanau County 269-467-5576 Andrew Hartwick St Clair County Central Dispatch County GIS Contact 906-337-3471 Ann Gasperich Keweenaw County 911 Dispatch 517-543-4924 April Heinze Eaton County Central Dispatch 911 Dispatch





# PSAP Administration: Requesting Permission







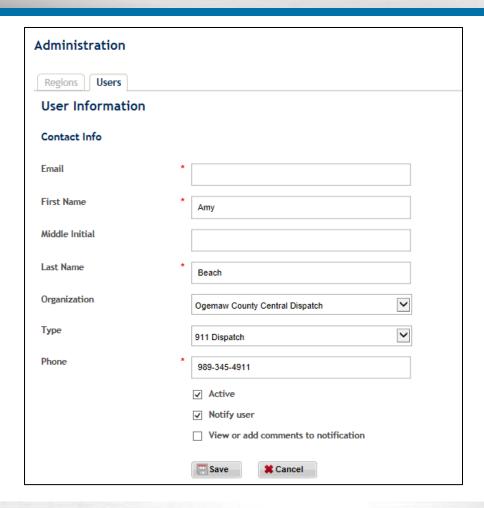
#### **PSAP Administration: Users**







#### **PSAP Administration: Users**







# **Data Sharing and Agreements**

- Memorandum of Agreement between CSS and each participating entity
  - Outlines roles and responsibilities of CSS and participants
  - Established disclaimers for data sharing
  - Signed agreement
- Exported data can only be used for 911 and public safety purposes



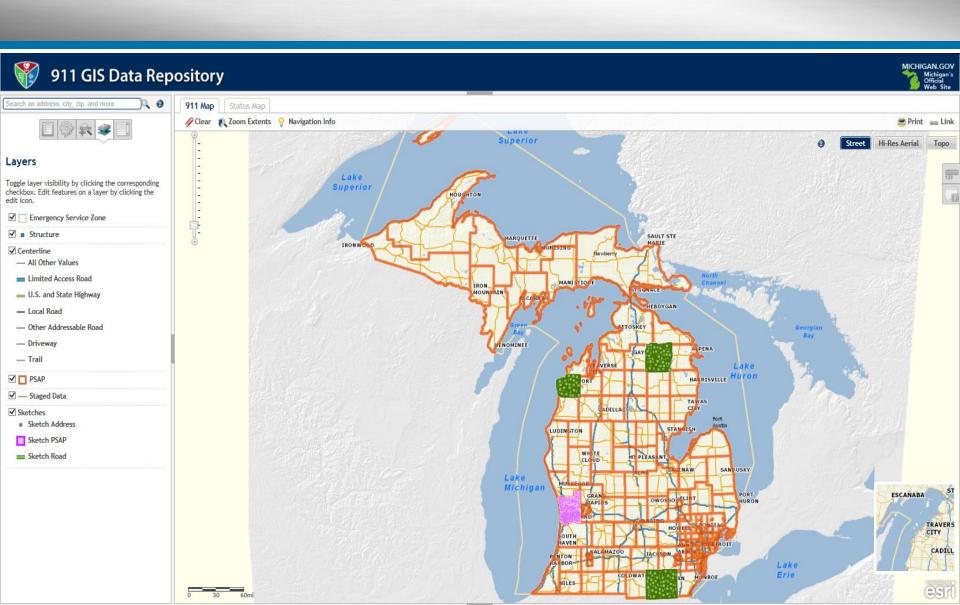


#### Potential Uses

- Only available for public safety via secure log in
- The data viewer could benefit PSAPs where mapping does not currently exist for dispatch
- The data viewer can be used to search addresses in other jurisdictions
- Supplemental map to existing systems
- Accessible via wireless in field or mobile command
- Can be accessed in an EOC during large incident crossing multiple jurisdictions

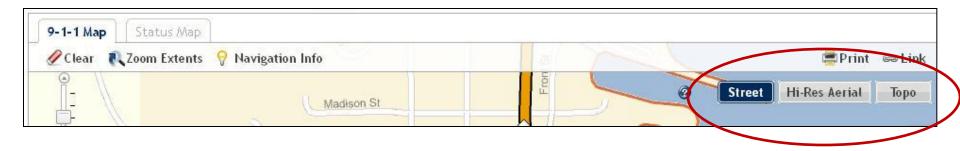




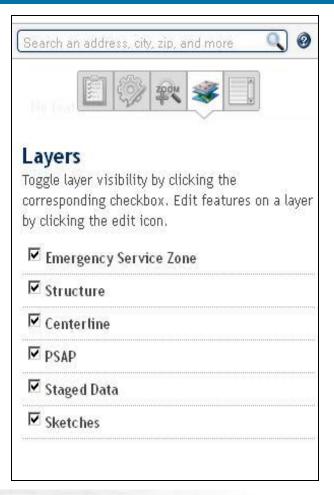


Users can view the maps in one of three modes:

- Street
- Hi-Res Aerial
- Topo

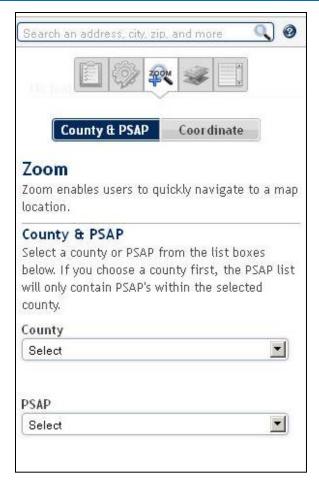






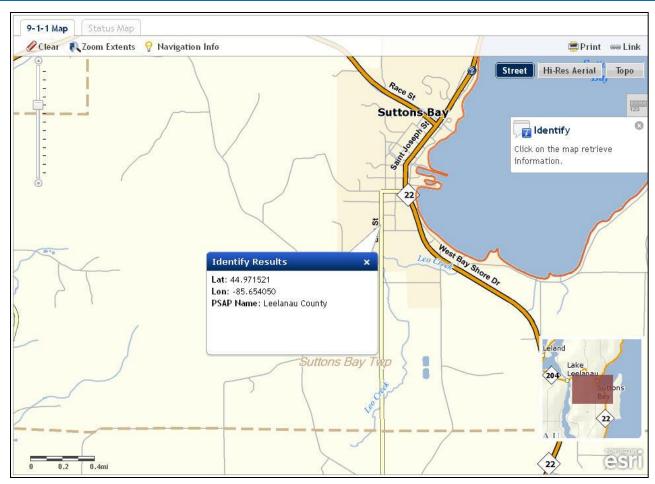
Users can select which layers they would like to view (located on the left-hand side)





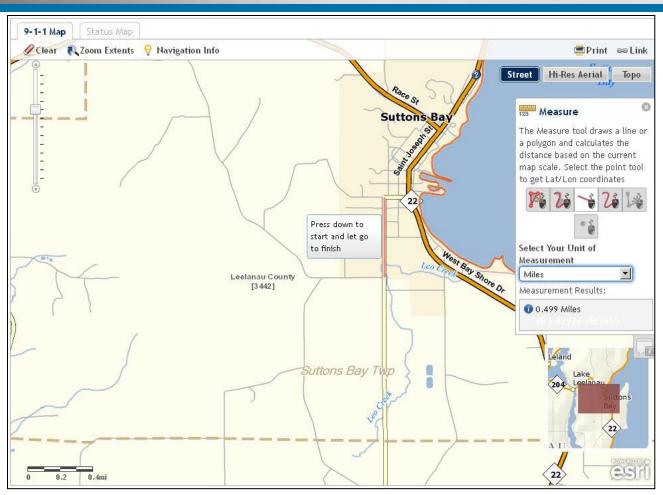
Zoom options are also available on the left toolbar





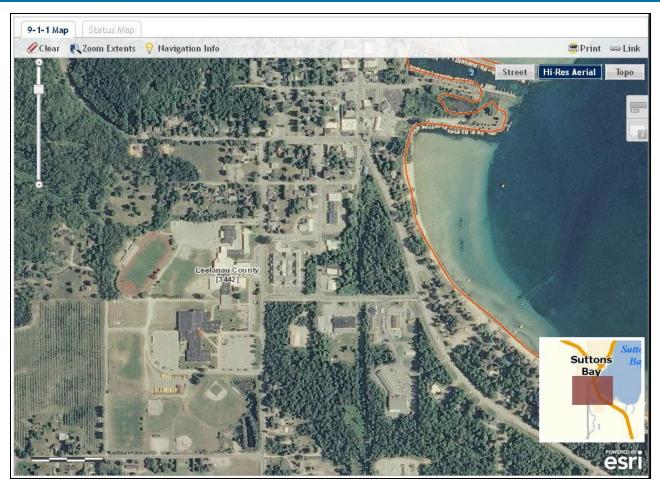
The 'identify' button will provide additional information (such as PSAP data) when you click on a location on the map.





Measuring tools are available on the right side of the viewer.



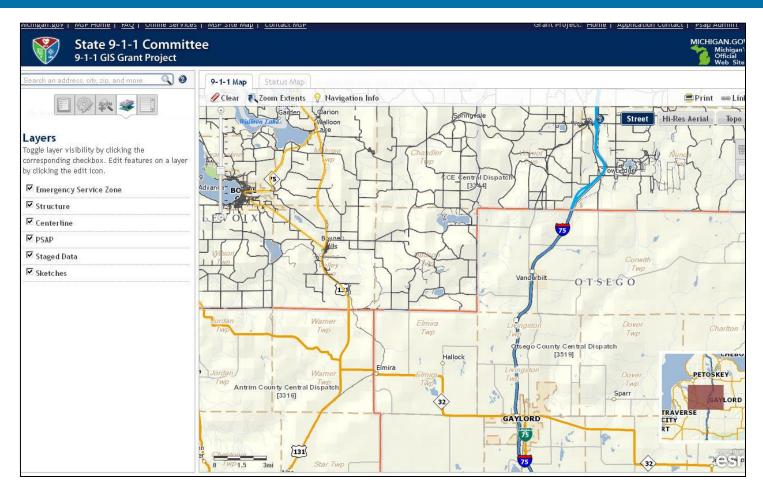




- Map Symbology
  - Populate FCC codes
  - Populate RDCLASS field
  - Outlined in addressing guide







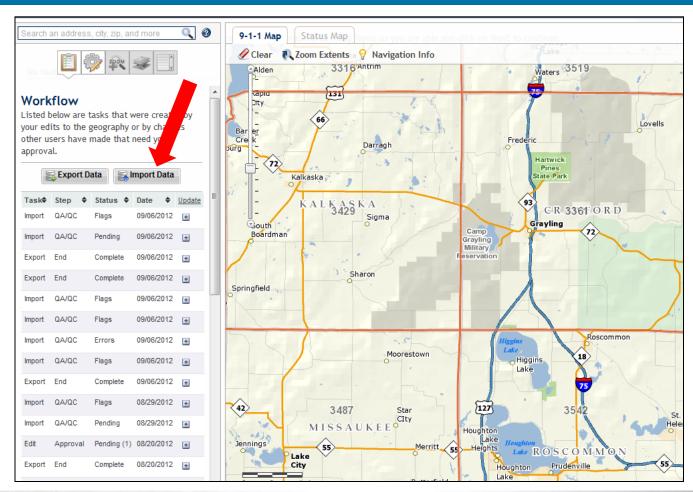


## **Import Data**

- Road centerlines
- MSAG only for validation against new centerline layer being uploaded
- Emergency Service Zones Optional
  - Beneficial for Mutual Aid
  - Will be beneficial for NG911 and interoperability
- Site Structure Points Optional
  - Can be partial layer

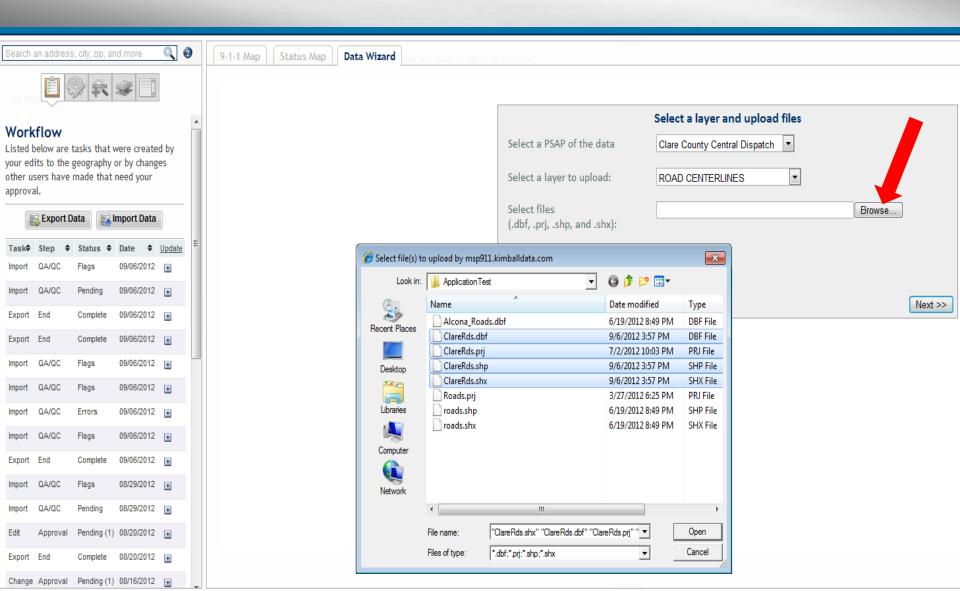








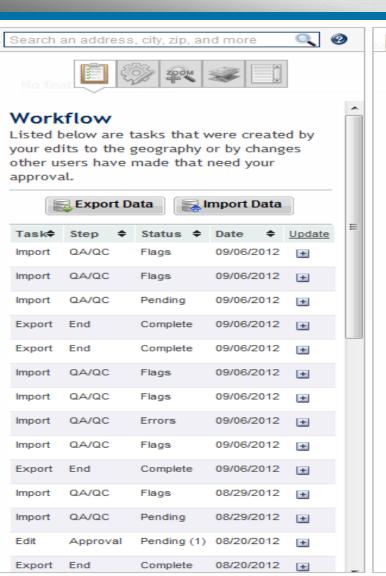




9-1-1 Map	Status Map Data Wizard and click on Next to conti	nue.		
	Please match	data fields.		
	ROAD CEN	TERLINES		
	Match	Fields		
	Repository Standards			
	SOURCE (type:A) *		•	
	DATEUPD (type:D) *		<b>-</b>	
	EFFDATE (type:D)		•	
	RCLID (type:A) *		•	
	COUNTRY (type:A) *		•	
	STATE_L (type:A) *	STATE_L	•	
	STATE_R (type:A) *	STATE_R	•	
	COUNTY_L (type:A) *	COUNTY_L	•	
	COUNTY_R (type:A) *	COUNTY_R	•	
	MUNI_L (type:A) *	MUNI_L	•	
	MUNI_R (type:A) *	MUNI_R	•	
	MCDDIV_L (type:A) *		*	
	MCDDIV_R (type:A) *		*	
	UNCORP_L (type:A)		•	
	UNCORP_R (type:A)		•	







9-1-1 Map Status Map

Workflow Details

Data Wizard

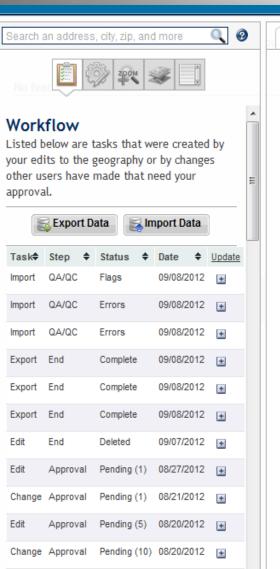
#### Centerline QA/QC Report (Flag Summary)

Flag Name	Flags Exception		
Record_Count	3849	0	
MUNI_LR_IsEmpty	1	0	
EFFDATE_DatatypeNotValid	3849	0	
LOGreaterThanHI	24	0	
RangeContainsAllZeros	213	0	
RangeParityInvalid	8	0	
RangeOverlap	65	0	
STSNoMatch	1	0	
FlippedRange	12	0	

Select a Flag Name above to see all records that failed that scrub.

Export with No Data (flags only): Excel CSV

Export with Data: Excel CSV



Flagged Records

Status Map

9-1-1 Map

Displaying records that failed the Flag: RangeOverlap

Previous

**Workflow Details** 

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Back to Summary

First

		3						
RCLID	Street	Left Community	Right Community	<u>LLO</u>	<u>LHI</u>	RLO	RHI	Exception
1981	W ASHARD RD	FREEMAN TWP	FREEMAN TWP	7501	7989	7500	7988	0
1982	W ASHARD RD	FREEMAN TWP	FREEMAN TWP	6001	6299	6000	6298	0
1983	W ASHARD RD	FREEMAN TWP	FREEMAN TWP	6301	6549	6300	6548	0
1984	W ASHARD RD	FREEMAN TWP	FREEMAN TWP	6551	6699	6550	6698	0
1987	W ASHARD RD	FREEMAN TWP	FREEMAN TWP	6051	6999	6050	6998	0
3346	W ASHARD RD	FREEMAN TWP	FREEMAN TWP	7501	7989	0	0	0
3318	BEECH TREE	SURREY TWP	SURREY TWP	3131	3199	3130	3200	0
3320	BEECH TREE	SURREY TWP	SURREY TWP	3131	3149	3130	3148	0
3147	S CLARE AVE	GRANT TWP	GRANT TWP	9041	9999	9040	9998	0
841	S CLARE AVE	GRANT TWP	GRANT TWP	9001	9939	9000	9938	0
3380	N CORNING ST	FARWELL	FARWELL	171	299	170	298	0
2414	N CORNING ST	FARWELL	FARWELL	1	199	2	198	0
3145	S EBERHART AV	E GRANT TWP	GRANT TWP	11911	11999	11900	11998	0
842	S EBERHART AV	E GRANT TWP	GRANT TWP	11001	11909	11000	11908	0
1027	FIVE LAKES DR	GRANT TWP	GRANT TWP	7401	7579	7400	7578	0
3096	FIVE LAKES DR	GRANT TWP	GRANT TWP	7581	7749	7580	7748	0

20 🔻

Last

Record Count: 65

Data Wizard

- Exception Field
  - Add a field called EXCEPTION to your local data Long Integer Data Type

Exception Code	Exception Description
1	Limited Access Highway Features
2	Driveways or Non-Addressable Feature
3	Legacy Addressing Scenario
4	Local Road Naming Convention
5	Value Falls Outside of Jurisdiction
6	Correction Pending Local Review
7	Overlapping Segment Is Valid





- RCLIDs Need to be populated and unique
  - Can use any local unique ID locally, needs to be compatible for upload into alphanumeric field type with a 50 character limit
  - Populate using OBJECTID or FID during import process or calculate that field to OBJECTID or FID in your local data





- QA/QC check similar to data assessments that were run as part of grant project
- Additional field checks during import
  - Jurisdiction values
  - Source and date of update
- Critical Errors that would prevent loading of data
  - no projection file, no RCLID, data types

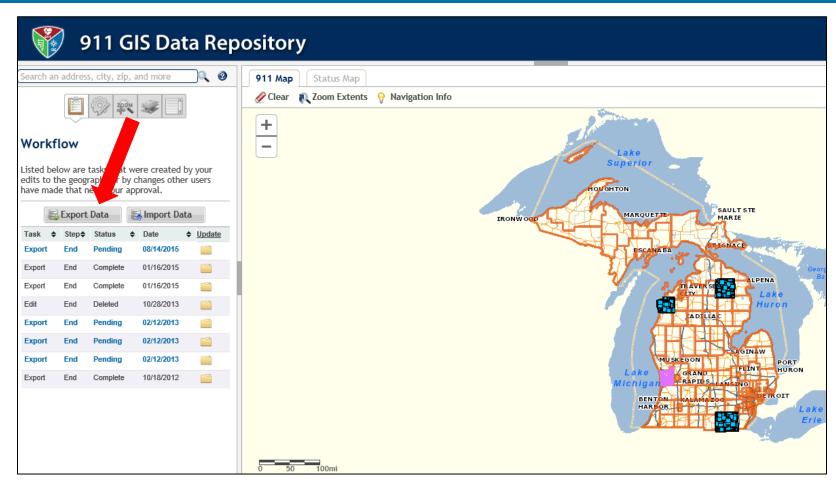




- User needs to have been assigned export rights to export any other jurisdiction's dataset
- PSAP Administrator must initiate request for one of their users to have export rights to neighboring jurisdiction's data
- PSAP Administrators have export rights to all dataset as a system setting
  - Allows for access to datasets in case of large emergency event

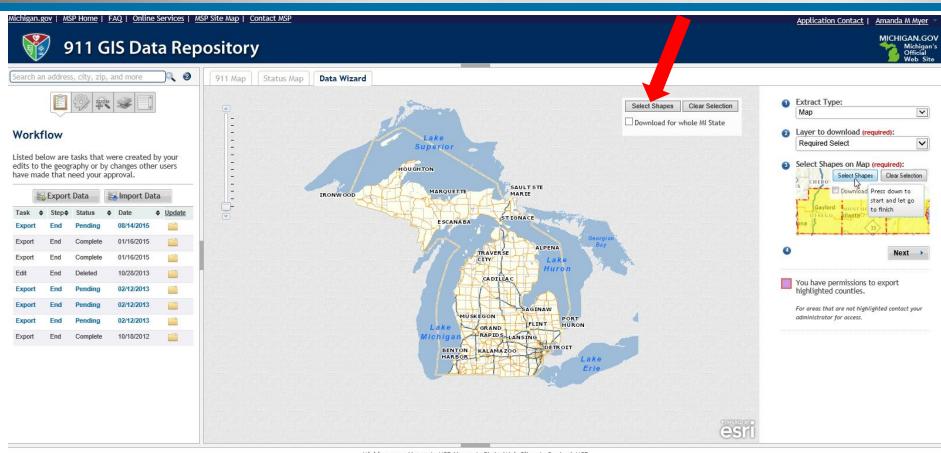








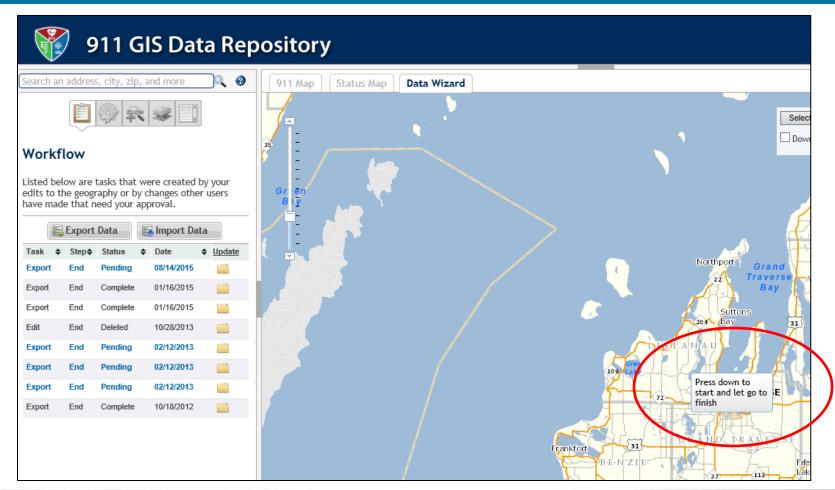






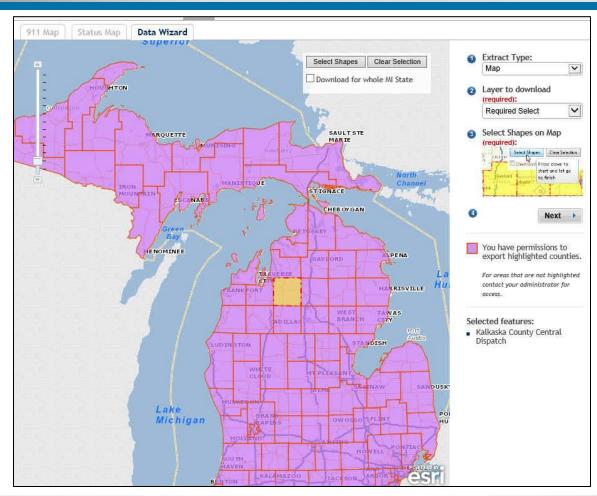






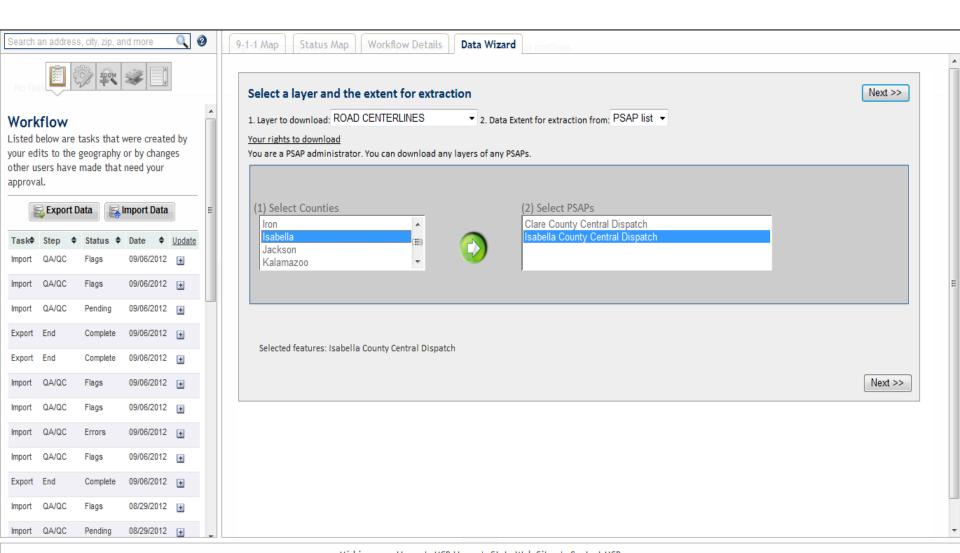


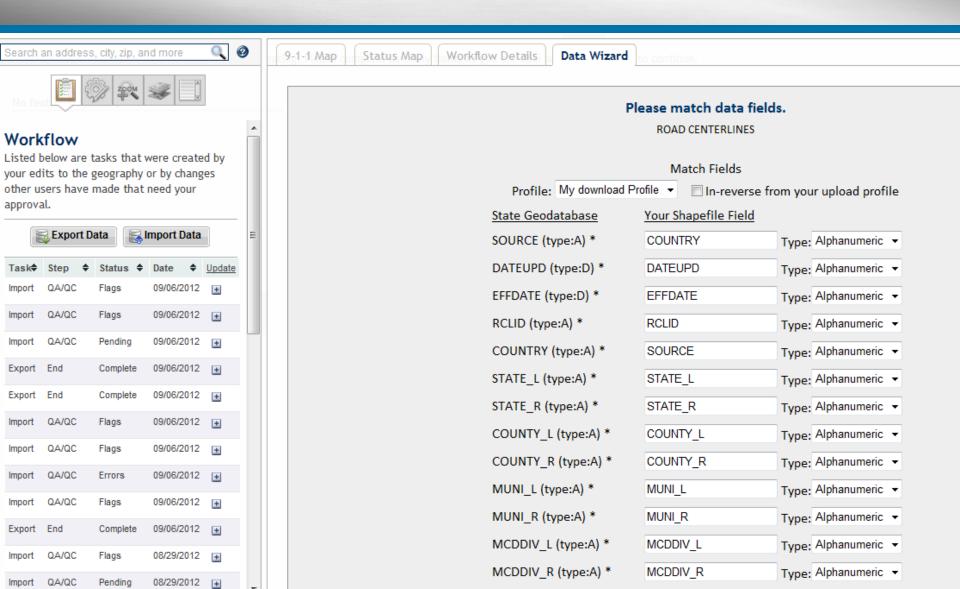


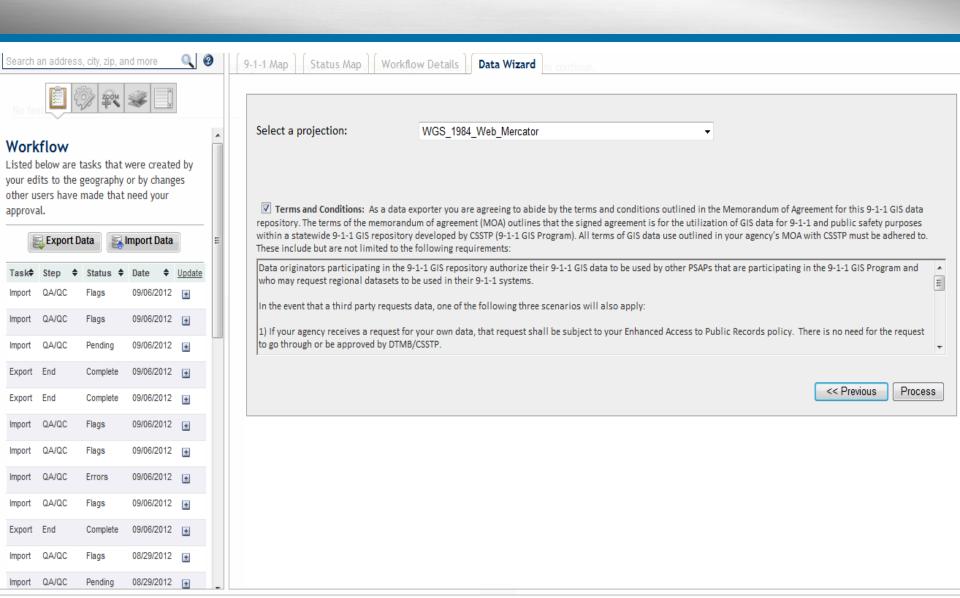


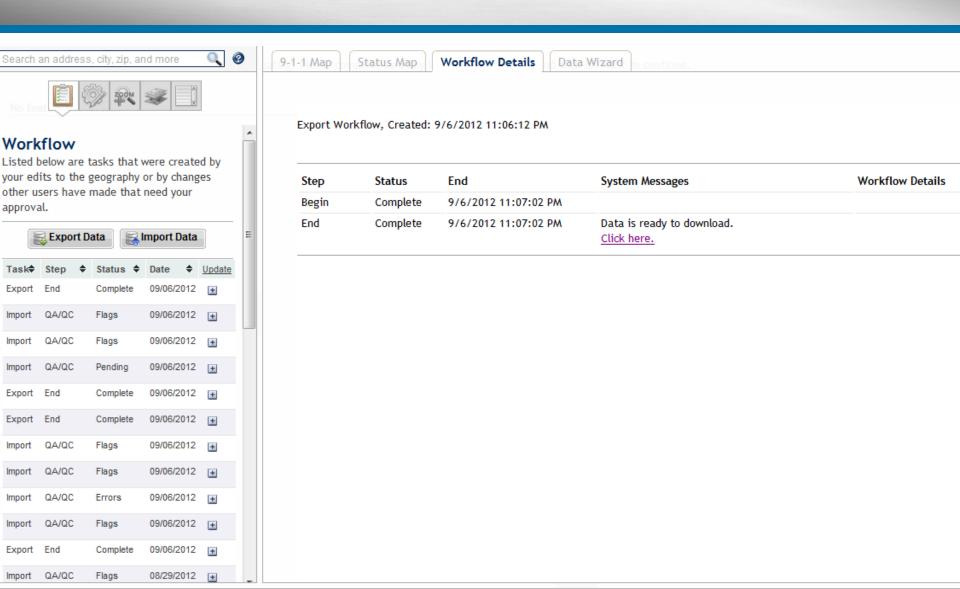












- CAD profiles
- Working with your CAD vendor to integrate regional maps
- Review edge-match, when possible, and coordinate with neighboring jurisdictions where larger discrepancies exist
- Data layers road centerlines, PSAP boundaries, emergency services zones\*, structure points\* (\*incomplete statewide layers)





#### Red Line Edits – PSAP Boundary

- PSAP Boundary Change Requests
  - Internal communication must be established at local level for approval process
  - Jurisdictions where Michigan Geographic Framework road centerlines are being used have opportunity to use the PSAP Boundary Change tools to make requests or approve changes since PSAP layer developed for the project is statewide





## Red Line Tools - PSAP Boundary

#### Requesting PSAP Boundary Change











PSAP Administrator makes red line edit and starts approval workflow



PSAP Administrator receives email to log into system and approve PSAP boundary change

PSAP Administrator receives status email



PSAP Administrator approves or denies PSAP boundary change





#### **Red Line Tools – PSAP Boundary**

#### Requesting PSAP Boundary Change

**CSS** 

Affected PSAPs



If approved by all affected PSAPs. CSS staff make boundary change and workflow sent for final approval by all PSAPs affected by change

PSAP Administrator receives status email



PSAP Administrators receive email to log into system, review final boundary edits, and make final approval



PSAP Administrator approves or denies PSAP boundary change





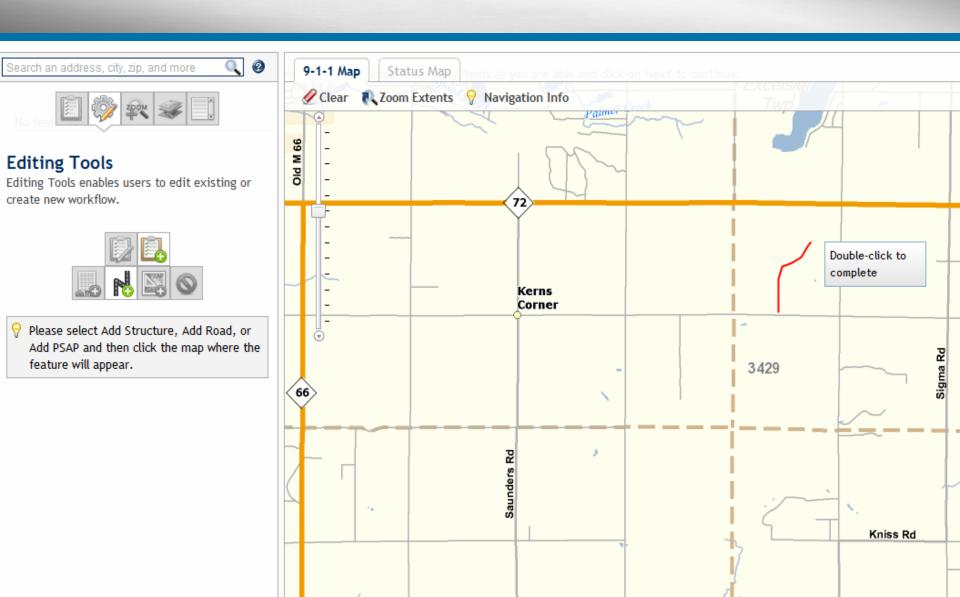
#### Red Line Edits – Roads or Points

- All users can add red line edits for road or structure points
  - Internal protocol for who red lines can be established, if necessary
  - Notification email goes to PSAP admin and GIS importer for the jurisdiction that the red line is drawn
  - If road is drawn across multiple PSAP jurisdictions,
     PSAP admin and GIS importer from both jurisdictions get notifications





#### Red Line Edits - Roads or Points



## **Edge-matching**

- Edge-matching is run during import. Roads are snapped to PSAP boundary layer
- Continued coordination between jurisdictions for edge-matching and addressing attributes along boundaries is also a NENA recommendation for sustaining long-term 911 GIS data integrity in preparation for NG911





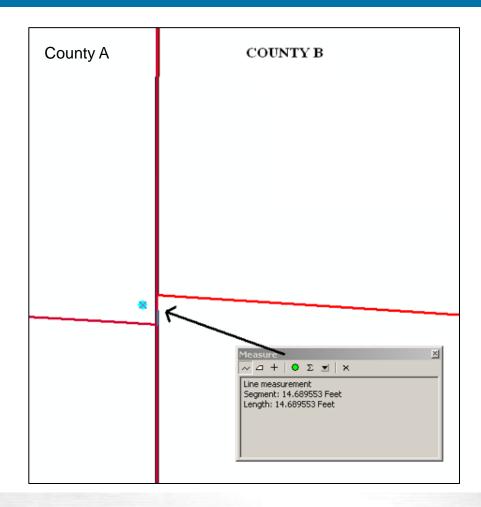
# **Edge-matching**







# **Edge-matching**







#### **Addressing Guide**

- Guidelines for addressing techniques
- Continue to incorporate standardization
- Road naming guidelines
- Addressing scenarios
- There will be unique local addressing scenarios
- GIS and MSAG synchronization





#### **More Information**

- www.michigan.gov/911GISGrant
- www.michigan.gov/snc
  - Harriet Miller-Brown

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